

ABSTRACT OF THE INVENTION

5 The present invention is directed to an arylation of a nucleophile by reacting the nucleophile with a substrate aromatic compound ArX in the presence of a copper catalyst, a base and water, wherein Ar is aryl, heteroaryl or alkenyl, X is halo, sulfonate or phosphonate, the base comprises an alkaline earth carbonate, bicarbonate, hydroxide or phosphate, and the copper catalyst comprises a copper atom or ion and a ligand.